

CHAPTER 2
**DUTIES OF THE
 FIRE SUPPORT TEAM AND THE OBSERVER**

2-1. FIRE SUPPORT TEAM

a. Personnel and Equipment. Indirect fire support is critical to the success of all maneuver operations. To ensure the accuracy of indirect fires, qualified observers are needed to locate targets and fires. Forward air controllers (FACs) and firepower control teams (FCTs) provide the expertise for close air support (CAS) and naval gunfire (NGF) respectively. For artillery and mortar support, FIST personnel act as the observers, or eyes, for the maneuver company. The FISTs are attached to maneuver elements at company level during deployment for training or hostilities. They are

normally assigned to the artillery units providing direct support to maneuver. Although the personnel and equipment in each FIST vary depending on the type of force supported, each FIST has (at least) a four-man headquarters. The headquarters personnel include the company FSO (an FA lieutenant), a fire support sergeant (an SSG), a fire support specialist (an SPC), and a radiotelephone operator (RATELO) and driver (a PFC). In addition to the FIST headquarters, a two-man FO party is authorized for each infantry platoon. Table 2-1 shows personnel and major equipment authorizations for each FIST. Transportation for platoon FO parties is provided by the supported force.

Table 2-1. FIST PERSONNEL AND EQUIPMENT

PERSONNEL AND EQUIPMENT	TYPE UNIT					
	MECHANIZED INFANTRY	ARMOR/CAVALARY	INFANTRY	LIGHT DIVISION	AIRBORNE	AIR ASSAULT
Company FSO (LT)	1	1	1	1	1	1
Fire support sergeant (SSG)	1	1	1	1	1	1
Forward observer (SGT)	3	0	3	3	3	3
Fire support specialist (SPC)	1	1	1	1	1	1
RATELO and driver (PFC)	4	1	4	4	4	4
HMMWV	0	0	1	0	1	1
AN/VRC-88	5	2	1	0	1	1
AN/VRC-91	1	1	1	0	1	1
AN/PRC-119	0	0	4	5	4	4
DMD	4	1	4	4	4	4
FIST DMD	1	1	1	1	1	1
FISTV or APC	1	1	0	0	0	0
G/VLLD	1	1	1	0	0	1

LEGEND:

DMD = digital message device (Appendix B gives detailed information on the DMD.)	LT = lieutenant
FISTV = fire support team vehicle	PFC = private first class
G/VLLD = ground/vehicular laser locator designator	SGT = sergeant
HMMWV = high-mobility multipurpose wheeled vehicle	SPC = specialist
	SSG = staff sergeant

b. Responsibilities. The mission of the FIST is to provide fire support for the maneuver company. To accomplish this mission, the FIST is responsible for the five tasks discussed below.

(1) **Fire Support Planning.** Fire support planning includes developing fire plans (target lists and overlays) and determining FO control options to ensure fire support is integrated into the company commander's scheme of maneuver and can be executed in a timely manner.

(2) **Fire Support Coordination.** The FIST must stay abreast of the maneuver situation at all times and monitor requests for fire support within the company to prevent fratricide as the result of friendly fire support. The FIST must advise the maneuver commander on fire support coordinating measures in effect.

(3) **Target Location and Calls for Indirect Fire.** With an accurate target location and a proper match of fire support asset to a target, the FIST can increase the effectiveness of indirect fire support.

(4) **Battlefield Information Reporting.** The observers are the eyes of the field artillery and a major source of information for the fire support community. Information may be sent in the form of artillery target intelligence (ATI) reports or spot reports. Information is also gathered from the target description and the surveillance received in each call for fire.

(5) **Emergency Control of Close Air Support and Naval Gunfire.** Forward air controllers and naval gunfire spotter teams (NGSTs) may not always be available. Therefore, the FIST must be proficient in controlling CAS and NGF.

2-2. DUTIES OF FIRE SUPPORT TEAM PERSONNEL

a. Company Fire Support Officer. The primary duty of the company FSO is being the FSCoord at company level. He is a full-time fire support advisor to the maneuver company commander, planner, and coordinator. The company FSO advises the commander on the capabilities, limitations, and employment of all fire support assets available to support his operation. These assets may include the M981 FISTV, the laser target designators, and the fire support weapon systems. The company FSO bases his actions on the needs of the supported force as directed by the maneuver commander's guidance. Additional responsibilities of the company FSO include the following:

- Employ all means of fire support.
- Integrate fire support assets into the maneuver commander's battle plan.

- Control the actions of the platoon FOs.
- Employ the M981 FISTV and/or laser equipment to maximize their capabilities.

b. Fire Support Sergeant. The fire support sergeant is the company FSOs assistant. Therefore, he must be able to perform all of the duties of the FSO and act in his absence. The duties of the fire support sergeant include the following:

- Employ all means of fire support.
- Act as the senior enlisted supervisor for the FIST.
- Supervise the maintenance of team equipment.
- Conduct and evaluate FIST training.

NOTE: Several training devices exist that the fire support sergeant can use to train the FIST. Appendix C provides information on these training devices.

- Supervise the establishment of FIST communications.
- Designate targets for "smart" munitions.

c. Fire Support Specialist. The duty of the fire support specialist is to help the fire support sergeant in the performance of his duties. His duties include the following:

- Employ all means of indirect fire support.
- Perform all duties of a platoon FO.
- Assist in the setup, operation, and maintenance of all equipment assigned to the FIST headquarters.

d. Forward Observer. At platoon level, except in tank companies and armored cavalry troops, the FO acts as the eyes of the field artillery and mortars. As the maneuver platoon's fire support representative, the primary duty of the FO is to locate targets and call for and adjust indirect fire support. Also, the FO must be able to do the following:

- Submit key targets for inclusion in the company fire plan (limited fire planning).
- Prepare, maintain, and use situation maps.
- Advise the platoon leader as to the capabilities and limitations of available indirect fire support.
- Report battlefield intelligence.
- Designate targets for smart munitions.

e. Radiotelephone Operator. The RATELO must be able to set up, operate, and maintain the equipment of the FIST headquarters or the platoon FO party. As a member

of the FIST headquarters or the FO party, the RATELO must be able to perform the duties of the fire support specialist at the FIST headquarters or of the FO at the infantry platoon.

2-3. FORWARD OBSERVER CONTROL

a. Control Options. When monitoring his FO's calls for fire, the company FSO has three control options available. After considering the tactical situation, the degree of training of his FOs, and the availability of fire support assets, he determines which option is best suited to the mission. He monitors all calls for fire regardless of the option employed.

(1) **Decentralized Option.** The platoon FO may call for fire from any fire support asset available to support his operation. This option gives him the most responsive fires; however, it allows the FIST headquarters (HQ) the least amount of control. Since the FO is allowed to determine which asset should engage each target, this option generally requires a highly trained observer.

(2) **Predesignated Option.** The FO is assigned a particular fire support asset from which he may request fire support, and he operates on that unit's net. If the FO thinks his target should be engaged with a different fire support asset, he must request permission from the FIST HQ to change assets. Permission is granted on a mission-to-mission basis. Under this option, fire support is highly responsive if the asset is suitable to the type of target.

(3) **Centralized Option.** The FO must contact the FIST HQ for each call for fire; and the FIST HQ refers the observer, or relays his request, to an appropriate fire support asset. This option is least responsive for the observer, but it offers the highest degree of control to the FIST HQ. This option generally is used when maneuver platoon leaders act as forward observers for their platoons.

b. Tailoring. Since the level of training and the tactical situation vary for each observer, the company FSO may assign each observer under his control an appropriate option. For example, the 1st Platoon FO may be decentralized, the 2d Platoon FO may be predesignated, and the 3d Platoon FO may be centralized.

2-4. FIRE SUPPORT TEAM VEHICLE (M981) EMPLOYMENT OPTIONS

The FISTV, when used as a FIST HQ, may be employed by use of one of three options. The company FSO must advise his maneuver commander as to the means of employment that will best allow him to do his job. Appendix D provides additional information on the FISTV.

a. Option One. In the first option, the entire FIST HQ operates inside the FISTV to provide fire support to the maneuver company. From the FIST HQ, the company FSO monitors all calls for fire from the platoon FOs. He monitors all company activities on the company command net and coordinates fire support with the battalion (bn) FSO on a fire support coordination net. This method allows the company FSO to be at the focal point of all fire support communications within the company zone of action. The disadvantage of this option is that the company FSO is completely dependent on frequency modulated (FM) radio communications to coordinate with the maneuver commander.

b. Option Two. In the second option, the company FSO or his representative works out of the commander's vehicle. The FISTV is positioned elsewhere in the company area to optimize its lasing and communications capability. The person with the commander takes an AN/PRC-119 and a DMD to the commander's vehicle so he can request fires and maintain contact with the FISTV. If the company FSO is with the commander, he can receive clear, concise guidance from the commander as to his plans. The disadvantage is that the company FSO is removed from the center of fire support activity; his ability to conduct any coordination is severely degraded. Any representative with the commander must still relay the commander's intent to the FIST HQ by radio. When advising the commander, the company FSO must consider the type of commander's vehicle. For example, if the commander's vehicle is a tank, he has no room in it for extra personnel. Removing one of his crew would degrade the capability of his main gun. Fire support personnel in the commander's vehicle must be able to see the battlefield.

c. Option Three. The third option is not selected by the company FSO but is directed by higher headquarters. The company FSO and the fire support specialist take two AN/PRC-119s and the FIST DMD and work from the commander's vehicle. The FISTV and the remaining equipment are used by higher headquarters as a COLT. This option severely inhibits fire support by taking away both the company's lasing capability and half of its fire support communications capability.

2-5. OBSERVATION POST SELECTION

The selection of the observation post (OP) is critical to the ability of the observer to effectively call for fire and to survive. The maneuver commander and FSCoord share responsibility to ensure that fire support personnel are in a position to call for fires according to the plan. This should include consideration of placing FIST or COLT members with the scout element.

a. Self-Location. The observer must accurately determine his position as soon as it is selected. Accurate self-location is a must for accurate target location and, thus, for effective fire with a minimum expenditure of time and ammunition. The observer must aggressively pursue every means to aid him in self-location. In addition to his map and compass, he should use laser range finders, position-locating systems, tank sights for resection, and so forth, whenever these devices are available. The selected position must enable him to do the following:

- Observe targets in the supported unit's area of operation (identifiable points on the ground).
- Evaluate the effects of fire brought on targets.
- Cover obstacles with indirect fire.

NOTE: The supported maneuver unit should always keep obstacles under surveillance and be able to call for fires through the supporting FIST. An obstacle not observed and covered by fire is no obstacle at all. The company FSO must check with the maneuver commander to ensure obstacles are under surveillance. This is also verified during rehearsals.

- Observe target reference points (TRPs) the same as other targets.

b. Observation. The OP must permit observation of the zone of action of the supported unit. The selection of the OP must be coordinated with that of other observer and maneuver OP in order to prevent or minimize gaps or dead spaces. Visibility diagrams should be constructed as time permits.

c. Characteristics. Elevated points, such as crests and trees, are often used for OPs. Landmarks and prominent terrain features should be avoided as these are probably targeted. When selecting an OP, the observer must consider the characteristics of forward slope versus reverse slope. Advantages and disadvantages are shown in Table 2-2.

d. Reconnaissance. Selection of an OP must be based on both map and ground reconnaissance. During the map reconnaissance, the maneuver unit's situation overlay must be used to determine the unit's area of action, potential OP locations, and routes to and from the OP. During the ground reconnaissance, care must be taken not to disclose the OP. A concealed route to and from the OP must be considered. Once selected, the OP must be occupied, communications must be established, and the OP location must be reported to the FDC. After occupation, the OP should be camouflaged and reinforced to provide cover; and a terrain sketch and a visibility diagram should be constructed. The observer must ensure that any position improvements do not make the OP vulnerable to enemy aerial observation.

2-6. FIRE SUPPORT TEAM VEHICLE (M981) POSITIONING

a. Considerations for the positioning of the FISTV are similar to those for OP selection. The FISTV should be positioned within the unit's zone of action where it can optimize its observation (lasing) capability yet maintain its survivability and communications capability. The crew must consider the factors of mission, enemy, terrain, troops, and time available (METT-T) when selecting a position.

Table 2-2. CHARACTERISTICS OF FORWARD AND REVERSE SLOPE POSITIONS

ADVANTAGES	DISADVANTAGES
FORWARD SLOPE POSITION (MILITARY CREST)	
<ul style="list-style-type: none"> ● View of front and flanks is better. ● Fires impacting on the topographical crest will not neutralize the position. ● The hillside provides background; this aids in concealment. 	<ul style="list-style-type: none"> ● Occupation during daylight is difficult without risking disclosure of the position. ● Radio communications may be difficult. It may be necessary to remote the antennas to the reverse slope. ● No cover from direct fire is provided.
REVERSE SLOPE POSITION	
<ul style="list-style-type: none"> ● The position may be occupied in daylight. ● Greater freedom of movement is possible. ● Installation, maintenance, and concealment of communications equipment are easier. ● Protection from direct fire is afforded. 	<ul style="list-style-type: none"> ● Often, field of view to the front is limited. ● Enemy fire adjusted on the topographical crest may neutralize the OP.

(1) Where is the area of observation? Is the FISTV being used as a FIST HQ or a COLT? If used as a FIST HQ, the FISTV is primarily a coordination center for company fire support command and control. If used as a COLT, it is primarily a laser and/or observation platform.

(2) What is the enemy's communications direction-finding capability? Digital communications signals are highly vulnerable to direction finding and may disclose the company's position.

(3) How long will the unit be in position? How long does it take the crew to set up or break down the FISTV? When does the FISTV have to move? The FISTV is slower than maneuver vehicles, and it may need to be moved early.

(4) What security support can the FISTV receive? A small crew cannot provide security. The FISTV must be positioned within the supported unit's area.

b. Additional considerations should include the capabilities and limitations of the equipment being employed.

(1) The FISTV is a thin-skinned vehicle, and it should be positioned away from thicker-skinned maneuver vehicles. When lasing capability is critical, the FISTV should be positioned in hull defilade with the targeting head erected for overwatch. This should provide the vehicle with cover from direct fire weapons.

(2) If an ideal position cannot be found, the crew should consider ground-mounting the G/VLLD and positioning the FISTV where the communications signal is masked. The G/VLLD should be positioned in a hardened OP to maximize its lasing capability.

(3) The effectiveness of the laser should be considered on the basis of the distance to the target area, the time available, and the range of the laser. For example, the G/VLLD offers good target location at extended distances but might prove ineffective in a close-in fight. The availability of smart munitions must also be considered.

(4) The FISTV should have a covered and concealed route of exit. It is a high-priority target.

c. When the FISTV is positioned in an offensive operation, it should bound forward, providing overwatch as much as possible. Because of setup time for lasing operations, the FISTV will primarily be a fire support coordination center in an offensive operation. Because of its lack of firepower and protection, it should not be located with the lead element. The FISTV should be positioned where it can communicate with the observers, the commander, and the supporting firing units. If the laser is to be used during the offense, the crew must have advance warning of any impending requirement to move. The FISTV is slower than the supported maneuver vehicles and may have difficulty keeping up during movement.

2-7. COMMUNICATIONS

a. The FIST communications are commensurate with the needs of the force. Therefore, the primary means of communication is normally dictated by the current battlefield situation. Tactical radio (either voice or digital) is used most of the time.

b. Digital communications equipment available for the FIST includes the DMD and the FIST DMD. The DMD is a two-way device that transmits and receives digital bursts over any standard communications equipment. The DMD is portable and is powered by a battery or a vehicle power source. It is easily attached to any -12 series radio, single-channel ground and airborne radio system (SINCGARS), or WD-1 wire. Since the DMD is a two-way device, the observer can send a fire mission and receive a message to observer digitally.

c. The FIST DMD has a four-channel communications capability. It can perform the same functions as the DMD and can serve as a communications relay point. As a relay, it lets the FIST headquarters review, modify, and/or forward calls for fire from the FOs to the appropriate fire support agency.

d. Communications options for the FIST and FIST radio nets are discussed in detail in FM 6-20-40 and FM 6-20-50 and will be included in FM 6-20-20 (now ST 6-20-20) when it is published.